DOCUMENT RESUME

ED 163 753 FL 009 721

AUTHOR Cohen, Andrew D.; Aphek, Edna
TITLE Easifying Second Language Learning.
PUB DATE Jul 78
NOTE 49p.; Best copy available

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Classroom Communication; College Students; Hebrew; Higher Education; Intensive Language Courses; *Language Instruction; Learning Activities; Questionnaires; Review (Reexamination); *Second Language Learning; Student Attitudes; Study Abroad; Study Habits; *Study Skills; *Test Wiseness; *Vocabulary Development

ABSTRACT

A study was conducted to investigate some basic learning activities in order to identify strategies that make learning more effortless. Study topics focus on acquisition of new second-language vocabulary, students' organization of their notebooks, studying for tests, observation of classroom communication, and test-taking strategies. Nineteen native English-speaking students from the United States who were spending their junior year in Israel were studied. They were taking an intensive Hebrew program for two months, followed by a field experience, and then less intensive Hebrew studies. A language background questionnaire was administered to the students to obtain pre-instruction profiles. Study results suggest that if students used some associational patterns for learning vocabulary, the words were retained successfully over time. No one note-taking or review method is appropriate for all students, but students did not differ much in basic note-taking and review patterns, as revealed by self-report. Students themselves can be a good source of information concerning study tips. Good and bad communicative strategies appeared across class levels and were used both by better and poorer students. It was demonstrated that it is difficult for an outside observer to establish the actual source of the error and to identify the learner strategy being employed without consulting the learners. Six suggestions about how to take tests were generated. The language background questionnaire is appended. (SW)

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EASIFYING SECOND LANGUAGE LEARNING

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A report
by

Andrew D. Cohen & Edna Aphek

The Centre for Applied Linguistics
The Hebrew University of Jerusalem

Neve Schechter and the School of
Education, The Hebrew University

July 1978

FL009121

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This project has been funded by the Jacob Hiatt Institute, Jerusalem, Israel, through Brandeis University.

Introduction

Recent research has focused increasingly on the good language learner (Rubin, 1975; Naiman, Fröhlich, & Stern, 1975; Wesche, 1977; Hosenfeld, 1976; Bialystok & Fröhlich, 1977a, 1977b; Cohen & Robbins, 1976; Cohen, 1977). More and more the emphasis is on identifying successful learning strategies -- strategies that could actually be taught to language learners to help them maximize the benefits of formal language instruction. It is not very clear which behaviors actually promote success. Learners themselves may not pay conscious attention to what they do. In order to identify strategies, therefore, we must focus our attention on basic aspects of the language learning process and also on the interaction between the learner and the teacher.

This study set out to investigate some of the basic things that language learners do, such as learning vocabulary, participating orally in class, organizing their notebooks, and taking tests, with the intent of identifying and describing strategies that "easify" the learning process -- i.e., strategies that make learning more effortless. Specifically, we sought answers to the following questions:

1. How do students learn new second-language vocabulary? If they make associations, what kinds and how successful are the associations over time?

2. What can we learn about second-language learning from the way that students organize their notebooks and study for tests?

3. What insights about good and bad communicative strategies in the classroom can be gained from empirical observation coupled with verification by the students themselves?

4. What strategies do students use in taking second-language tests?

Subjects

The subjects were nineteen native English-speaking students on a junior year abroad program from the United States to Israel. They were taking an intensive Hebrew program for two months at the Jacob Hiatt Institute of Brandeis University, in Jerusalem, followed by a field experience, and then continued Hebrew, less intensively. During the period of instruction, the learners lived together within the Institute or in nearby apartments. During the intensive Hebrew phase, students received four hours of formal classroom instruction each day, four times a week, supplemented by a series of lectures in Hebrew on various topics. The students were divided into three levels of proficiency: beginners (N=9), intermediate students (N=6), and advanced students (N=4). During the less intensive phase, the students received six hours of Hebrew per week, and the rest of their courses such as sociology, political science, etc., were conducted in English.

A screening questionnaire was devised in order to obtain pre-instruction profiles. The instrument was designed and piloted beforehand, with an idealized good-language-learner profile in mind. The questionnaire asked for the total number of languages that the student had studied, type of exposure to each, and ability in the different skills. Students were also asked about their formal and informal exposure to Hebrew before the summer course, and were asked to rate themselves in different areas. The students also rated themselves in English vocabulary and grammar. Students were asked to indicate how they classify a new language with respect to vocabulary and grammar. Finally, the students were requested to check off (from a list provided) the strategies that they might use when they did not know a particular word in the target language.

This screening device was administered at the start of instruction,

in July, 1977, on a group basis (see Appendix for a copy of the questionnaire).

On the basis of the questionnaire, the following general information was learned about the subjects. Most of them had been exposed to two or more languages aside from English. All but three had had exposure to Hebrew, and a full fourteen had studied French (a popular language on the U.S. East Coast, where these students came from). Of those who had studied Hebrew, most had studied it for from four to six years. One had studied it for sixteen years. More than half had studied rather intensively (i.e., more than once a week). The grades that they received in Hebrew school classes in the U.S. were high, most reporting "A"s, while they generally described their mastery of Hebrew grammar as "poor" and the extent of their vocabulary as "limited." When asked about their facility at learning grammar rules and vocabulary in other languages that they had been exposed to, most rated themselves as "fair" or "good" (see Table 1).

We were also interested in how they would rate these areas in their native language. Most rated themselves as excellent, but three indicated they were only fair at learning grammar rules, and one reported being fair at learning vocabulary.

The students generally rated their skills in Hebrew as lower than in other foreign languages, in all four skill areas -- understanding a conversation, engaging in a conversation, reading a magazine, and writing a composition (see Table 1, #10).

Students as a group reported learning grammar more by making up their own rules and making lists of errors than by using resource grammar books. They reported using textbook rules the least frequently of all (see Table 1, #11). They reported learning vocabulary most frequently by synonym groups, then by parts of speech, then by cognates, and

Table 1

Summary Data from Language Background Questionnaire (N=19)

1. Number of languages exposed to:

	N
1	1
2	9
3	8
4	1

2. Languages exposed to:

	N		N
Hebrew	16	Latin	2
French	14	German	1
Spanish	6	Classical Greek	1
Yiddish	6		

3. Length of Hebrew study:

	N
-1 year	3
1-3 years	4
4-6 years	8
10-16 years	4

4. Intensity of study:

	N
once a week	7
several times/week	8
every day	1

5. Overall grade in Hebrew:

	N
A	9
B	4
C	2

6. Mastery of grammar in Hebrew:

	N
good	3
fair	2
poor	12

7. Extent of vocabulary in Hebrew:

	N
good	3
fair	1
limited	13

8. Learning grammar rules

in English	N	in other languages	N
excellent	9	good	7
good	7	fair	9
fair	3	poor	3

9. Learning of vocabulary

in English	N	in other languages	N
excellent	12	good	9
good	6	fair	7
fair	1	poor	3

10. Rating of Language Skills (good=3, fair=2, poor=1, none=0):

	Understand Conversation	Engage in Conversation	Read Magazine	Write Composition
Hebrew				
Mean (N=19)	1.21	1.10	.63	.84
S.D.	.25	1.05	.83	1.12
Other Languages				
Mean	2.15	1.76	1.69	1.39
S.D.	.85	1.00	1.07	.88

11. Learning grammar by: (all the time=1, sometimes=2, rarely=3, never=4)

	Textbook rule	Resource grammar books	Making up own rules	Making lists of errors
Mean	3.63	3.05	2.21	2.21
S.D.	.50	.91	.92	.79

Table 1 (contd.)

12. Learning vocabulary by: (all the time=1, sometimes=2, rarely=3, never=4)

	Topic Groups	Parts of Speech	Cognates	Synonyms
Mean	3.21	2.68	2.74	2.58
S.D.	.71	.88	.93	.69

13. Communicative strategy when don't know word:

	Coin word	Describe precisely	Describe loosely	Use general term	Gesture
Mean	2.11	2.63	3.05	2.95	3.26
S.D.	.88	.96	.70	.70	.81

(all the time=1, sometimes=2, rarely=3, never=4)

least often by topic groups (Table 1, #12). When in the middle of a conversation, they did not know the word to use, they reported themselves most likely to coin a word, then to describe the word precisely, then to use a general term, then to describe the word loosely, and then to use a gesture (Table 1, #13; also see Language Background Questionnaire, Appendix).

Since answers to each of the four research questions were pursued through what amounted to four separate mini-studies, each will be reported in turn in its entirety -- i.e., procedures, findings, and discussion, in the following order: vocabulary learning, notebook organization and study for tests, classroom observation of communicative strategies with student verification, and test-taking strategies.

I. Learning Vocabulary in a Second Language

Researchers are increasingly interested in the relationship between general research on memory and memory in learning a second language. Stevick (1976), for example, devotes considerable attention to a review of the memory literature and its relation to verbal memory in second-language learning. Cook (1977) also devotes attention to this area. If research on learning second-language vocabulary can be characterized, then it can be characterized as reflecting one-shot studies rather than longitudinal ones, and often involving experimental tasks not usually part of regular classroom activities (e.g., Henning, 1973; Cook, 1977). When learning by association is introduced, then the types of associations are restricted -- association to other words in the target language through sound or meaning (Henning, 1973) or association by topic group (Cook, 1977). Researchers have investigated inconclusively various conditions for

vocabulary learning, such as through context or through lists (Gershman, 1970; Johnson, 1977), and at least one investigator has specifically suggested that learning be investigated over time (Gershman, 1970).

Studies on the good language learner which have vocabulary learning as one component may refer to word associations as a good thing. For example, Wesche (1977) suggests that learners "exploit the rich associational possibilities of new material both through conscious association-making and meaningful practice in the second language" (p. 19).

What we felt was needed was longitudinal research on second-language vocabulary learning, based on a realistic classroom activity (e.g., glossing in the native language new words appearing in a text). We also wanted to open up the research to the total array of possible associations that the learner might make. We also were interested in injecting the element of review or what Briscoe (1977) refers to as "post-evaluation practice," since part of long-term learning consists of re-learning material that is recycled.

With these interests in mind, in July, 1977, we undertook a preliminary pilot investigation of learning through word association among seven learners of Hebrew as a second language at the Jewish Theological Seminary's summer course in Jerusalem. This longitudinal study was conducted over 40 days. We found that words learned through association were generally retained, as indicated by performance on a series of three recall tasks. Furthermore, students produced a number of types of associations.

With the experience from this initial study, we then set out to investigate the topic in greater depth and over a longer time frame. We subdivided the basic research question regarding vocabulary learning and the use of association into the following specific questions:

When asked to learn new vocabulary from a written text in class, what do students do? Do students make associations? If so, what kinds? How successful are these associations over time? Does student proficiency affect success? Are there differences in types of associations across class levels? Does degree of contact out of class have any effect on words learned through association? Of what benefit are associations which are supplied by teachers? To what extent does seeing new vocabulary in context help in the recall of these words (as opposed to encountering these words in lists)? What is the relationship between success at vocabulary learning and the frequency of use of various communicative strategies when the learner lacks the appropriate word?

Procedures

Seventeen of the students (9 beginners, 6 intermediates, and 2 advanced) took part in this study and were given seven different tasks, spanning approximately 100 days (July 27-November 4, 1977). The following is a listing of tasks by approximate day. The actual day varied slightly by group level. Note that students were given feedback on their answers and had time to review prior to starting Tasks #3 and #4.

Task #1, 1st day -- Original Text: The learners were given a passage in Hebrew to read, according to their level of proficiency (beginning, intermediate, or advanced, respectively). They were told to underline words that they did not know, both as the teacher read the passage out loud and then as they read it over to themselves. Then the teacher provided an English gloss for each word that they had underlined. The students were then given class time to learn these words and were asked to write in the margin what, if any, learning aid they had used to learn a word, i.e., association with the structure of the word, association with another word in Hebrew or with a word in English, and so on.

Task #2, 2nd day -- Text with Personalized Underlinings: The learners were given the same text with the words that each learner did not know underlined, but lacking the glosses that they had written in. They were asked to supply these glosses.

Task #3, 5th day -- Personalized Word List: The learners were given an opportunity to review corrections on their glosses, and then were given a personalized list of the words that they had underlined, but this time out of context.

Task #4, 7th day -- Common Word List: The learners first got feedback as to correct glosses for their personalized list, and then they were given a list of ten words of common difficulty to the majority of their group. They were asked to supply glosses.

Task #5, 17th day -- New Passage: A new passage was prepared, in which care was taken so that the general difficulty level would be the same and so that the common words would appear in the same form as in the original passage but in a different order. Students were asked to supply glosses and to indicate the frequency with which they had been in contact with the word since they had encountered it in this text ("no contact," "some contact," or frequent contact").

Task #6, 90th day -- Personalized Word List: The learners received the same individualized word list as in Task #3, for which they were to supply English equivalents. They were also asked to indicate the frequency with which they had been in contact with the word ("no contact," "some," or "frequent").

Task #7, 100th day -- Original Text with Individualized Words Deleted: The learners were given the original text from Task #1, this time with their individualized words deleted and with English glosses written over

the deletions. The learners were now asked to supply the missing words in Hebrew. Thus, this last task marked a departure from the previous tasks in that now the students had to provide a Hebrew gloss for the English word, however, the original Hebrew context was provided. The reason for this task was to provide a check for two-directional vocabulary learning (L1 → L2 and L2 → L1). A learner's favoring of one direction (e.g., L1 → L2) could affect his ability to comprehend or produce the desired word in the second language.

Findings

In most instances, students simply tried memorizing the words that they did not know. As an aid to memory, some students rewrote the Hebrew word on the bottom of the page along with the English gloss.[1] The number of words that students requested glosses for (in Task #1) ranged from 11 to 40. The mean percentage of correct glosses across all tasks was 75%. In other words, in 3/4 of the cases, students were retaining new vocabulary words over time, whether through straight memorization or through the use of associations.

Six of the nine beginners reported associations that they used, five of the six intermediates, and both advanced students. It is likely that at least some of the associations made were a result of our specific request that they record any associations that they made. It was perhaps surprising that even with only 13 students reporting associations, we still tallied as many as eleven different types of associations. And it must be remembered that these were only those associations that students made when given a specific classroom task -- i.e., associations for words glossed in a text. In other words, if students were learning words in conversation out of class, there could be other associations as well --

1. In the mini-study on organization of the notebook and studying for tests, several students specifically noted that they had to write down a word in order to learn it.

such as by touch, smell, taste, tone of voice, identification with a person, with an event, and so forth.

The following are the categories of associations that appeared:

1. Associating Hebrew words to English words with a similar sound; e.g., memaher 'he hurries' to "hare," lazuz 'to move' to "snooze," imunim 'training' to "ammunition."

2. Associating part of a word to an English word by sound and meaning, and the other part to a Hebrew word by sound and meaning; e.g., benatAyim 'meanwhile' -- ben to beyn 'between' and tayim to "time."

3. Associating sound and meaning to an English phrase; e.g., benatayim to "been a long time."

4. Associating Hebrew words with other Hebrew words by sound; e.g., tsava 'army' to tsena 'leave,' rexov 'street' to raxok 'far,' ramzor 'street light' to or 'light.'

5. Associating Hebrew words to proper names; e.g., maxane 'camp' to mane (the street that the Jacob Hiatt Institute was on).

6. Associating to another language through meaning; e.g. tox 'inside' to tuchus (Yiddish for 'backside').

7. Associating by structure; e.g., lifney 'before' to lifamim 'sometimes,' seder 'order' to lesader 'to order.'

8. Associating by one or more letters; e.g., masait 'truck' by [m], in that vehicles often begin with [m] in Hebrew; maxane 'camp' by the picture of [x], (∩) in Hebrew, because it looks like a shelter; beemtsa 'in the middle' by the Hebrew [m] in the middle.

9. Associating with a frequently-seen sign; e.g., laatsor 'to stop' with the sign atsor 'stop' in busses.

10. Associating with the place in the text where the word appeared.

11. Associating by making a mental picture of the word.[1]

1. In the preliminary pilot study with Jewish Theological Seminary students, at least two other types of associations appeared -- i.e., associating a Hebrew word to an acronym in the first language (e.g., ofek 'horizon' to O.P.E.C.) and associating a word with a person's name (e.g., ofek with Aphek).

After charting so many associations, we then were curious to know which of these types of associations were actually successful in the sense that the learner was able to provide a correct gloss in English on all the tasks in which the word appeared. We were, of course, making certain inferences here, namely that retention over time was due to the initial association.

How successful are these different association patterns? And did frequency of contact with the words out of class make a difference? The following is not an exhaustive discussion of the associations made by the thirteen students who reported associations, but rather consists of illustrative examples from five of the students -- a beginner and four intermediate-level students, in that order:

1. After learning maxane 'camp' through the [x] looking like a shelter, a student got it wrong in Task #2, the text with personalized underlinings. But then it was correct in the three subsequent tasks in which it appeared, twice in list form and once in a passage. She reported no contact with the word out of class.

2. A student who made association to the [m] in vehicles got masait 'truck' correct three times, once in text and twice in list form, and then wrong the last time it appeared in a text, when she had to supply the Hebrew for the English gloss. In this last trial, we note that the source of her association had been removed, i.e., the Hebrew [m]. This student had two completely successful associations over time, while reporting no contact with either word out of class: association by sound within Hebrew (ramzor 'street light' to or 'light'), correct all four times that it appeared, twice in text and twice in list; and association to English and Hebrew sound and meanin (benatayim 'meanwhile' to beyn 'between' and "time"). She also made a structural association for magia

'he arrives,' which was glossed wrong twice (both in lists) and then glossed correctly in text twice and in list once. In this instance, the learner reported some contact with the word out of class.

3. A student who associated beemtsa 'in the middle' with the [m] in the middle of the word, got this word correct in all tasks in which it appeared (three times in text, twice in lists). She reported "some" contact with this word out of class.

4. A particularly weak student got the four words that he made associations for correct in all tasks in which they appeared. He reported frequent contact with the first three and no contact with the fourth. His associations were laatsor 'to stop' to the sign on the bus, atsor 'stop,' association by sound from Hebrew to English (memaher 'he hurries' to "hare"), association of a word with a picture (nixnas 'enters' to a picture of "going in"), and yešiva 'meeting' with the Yiddish Yeshiva.

5. As a final case, a student made several structural associations, one of which was successful in producing the correct gloss all four times that it appeared, although she reported "no contact" with the word out of class (yešiva 'meeting' to laševet 'to sit down'), and the other reflected inconsistent results (mehanesia 'from the trip' to linsoa 'to travel') -- i.e., incorrect in text, then correct in list, then incorrect in list.

If general conclusions can be drawn from these results, it is that by and large if students, whatever their class level or individual proficiency level, used some associational patterns for learning vocabulary, the words were retained successfully over time. We also saw that the frequency of contact with words out of class did not necessarily affect the results one way or another. In other words, students who made successful associations retained words even when they had no contact with the word out of class.

Inadvertently, we were also able to investigate the effects of a teacher's

supplying associations for the students. The intermediate level teacher actually gave six associations, perhaps partly because we had not specifically told teachers not to supply associations. Actually, this afforded us the opportunity to see whether students used the teacher's associations and if so, whether this helped. In fact, two of the five students making associations at this level each used two of the teacher's associations and got the words correct in all tasks. Another student reported using one of the teacher's associations and was not successful in learning the word (mitkadem 'advances' to lalexet kedima 'to go forward' — association by structure and teacher's acting it out). Then two students did not use the teacher's associations at all. What we find here is purely suggestive, given the small numbers. It appears that teachers can provide useful associations and that there will still be students who do not use these associations, but rather use their own or none at all.

What, then, might be the teacher's role in vocabulary learning through association? First, s/he can simply lay out the range of possible associations and discuss these with students, thus leaving the student to select whatever association s/he prefers for a given word. Or the teacher can provide actual suggested associations as new words come up. One possible approach is to provide a set of security words such as those found in Table 2. Another approach is to present sets of words from a given topic group, clustered visually on a page (see Ettinger, 1950, for an early attempt to teach Hebrew in this manner).

Taking a more statistical look at the vocabulary learning patterns altogether, Figure 1 provides a graph of performance by individual students at each of the three levels. The graph indicates the total number of words glossed in Task #1 by student. Then for tasks #2-7, the percent correct on each task is indicated. As mentioned above, the

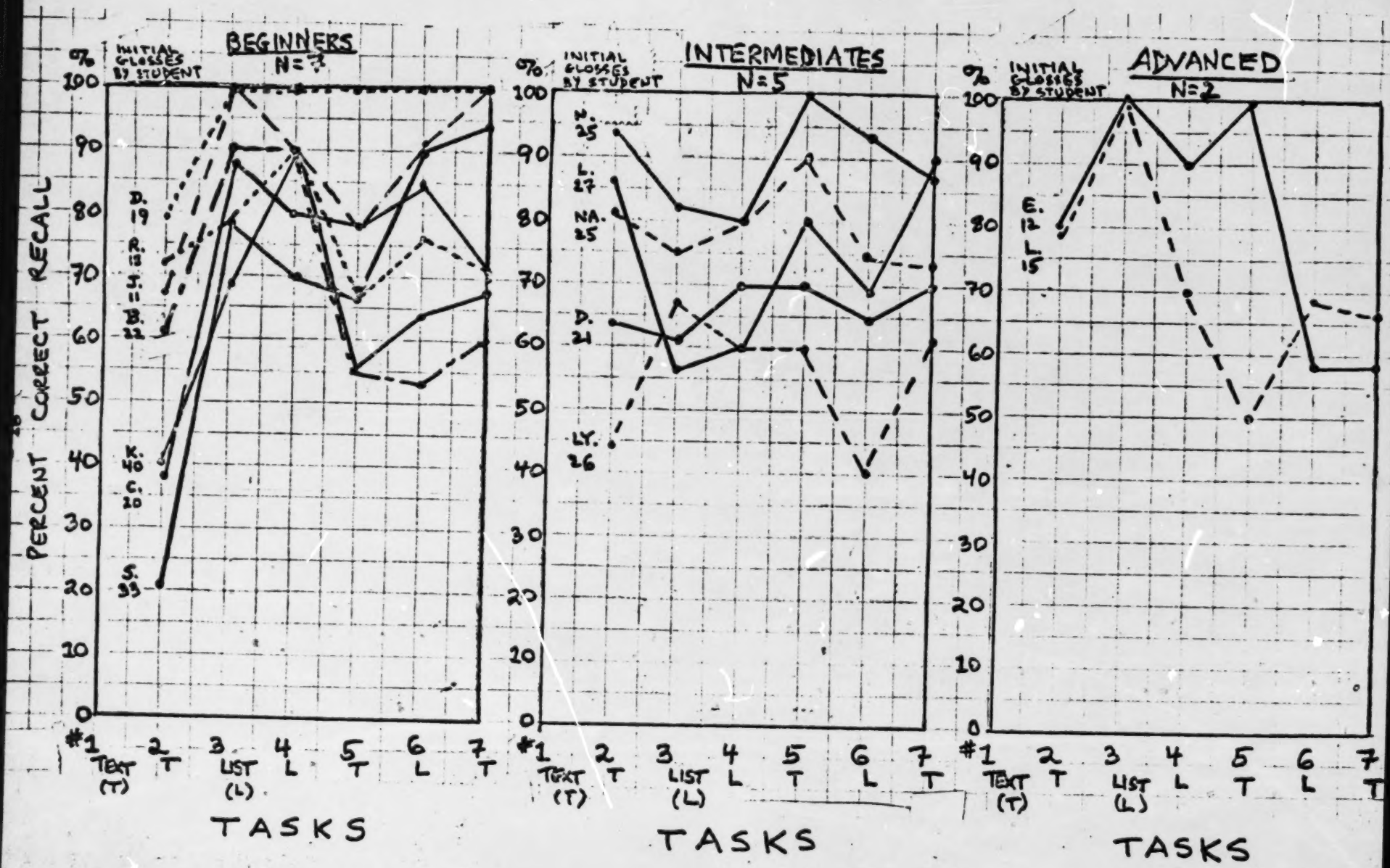
Table 2

Examples of Security Words
for Learning Hebrew Vocabulary

A		
agony	---	yagon
air	---	avir
antique	---	atik
B		
base	---	basis
bashful	---	bayšan
batter	---	(l)vater
bizarre	---	muzar
brush	---	(mi)vrešet
C		
cable	---	kevel
cane	---	kane
cape	---	kef
cholera	---	xolera
climate	---	(a)klim
collar	---	kolar
D		
dagger	---	deker
dull	---	dal
F		
fall	---	(na)fal
fruit	---	pri
G		
grade	---	dereg
I		
immediate	---	miyad
K		
kit	---	tik
L		
loom	---	nul
M		
macabre	---	(mi)kever
map	---	mapa
mask	---	masexa
measure	---	(bi)mesura
mystery	---	mistorin
N		
nasal	---	nazelet
nod	---	(la)nud
O		
occur	---	kara
organize	---	(l)argen
P		
pace	---	pasa
paradise	---	pardes
prize	---	pras
S		
scale	---	(mi)škal
six	---	šeš
street	---	sitri
T		
table	---	tavla
tag	---	tag
tariff	---	ta'arif
tour	---	(la)tur
track	---	derex

(From Aphek, Edna. "Security Words as an Aid for Vocabulary Learning." Hed Ha-Ulpan (24-25), March-April 1978. 5. (In Hebrew))

Figure 1
VOCABULARY LEARNING TASK



average correct glosses across tasks and across student level was 75%. The very fluctuation in performance from task to task prompted a further analysis, namely, calculating how the average performance on the three tasks involving contextualization of vocabulary compared with the average performance on the three tasks involving lists.[1] These results showed that at the beginning level, tasks involving lists were easier (average 84% correct) than were tasks with contextualized words (average 69% correct), whereas at the intermediate level, tasks with contextualized words were easier (average 77% correct) than those with lists (average 70% correct). This finding may suggest that only once students have some background in Hebrew are they able to benefit from having vocabulary in a context; that until that time, the appearance of words in isolated lists simply means fewer distractions. There being only two advanced learners, findings with this group are merely speculative. In fact, these two learners did better on the lists (average 81% correct) than on the contextualized tasks (average 72% correct). One of the learners consistently got a word wrong every time that it appeared in context and correct every time that it was contextualized (nosvaka 'she struggles'). This is clearly an issue for further investigation with larger groups. Perhaps these findings simply reflect the fact that different learners do better on one type of task than the other.

Further statistical analysis involved correlation of the variables on the Language Background Questionnaire (see Appendix) with the students' mean performance on vocabulary learning across all the tasks. The results from one part of the questionnaire are worth mentioning here. A questionnaire item called for the following:

> What do you do when you're not sure of a word? Let's say that you don't know the word for "balloon" in Hebrew. How might you get the concept across? (all time=1, sometimes=2, rarely=3, never=4)

1. We thank Shoshana Blum-Kulka for suggesting this line of analysis.

___coin own word; e.g., cadur-avir 'air-ball'
___describe concept as precisely as possible; e.g., cadur migumi dak, malo avir 'a thin rubber ball, filled with air'
___describe concept loosely; e.g., ze agol vse nafuax vze af. 'it's round and it's blown up and it floats'
___use a more general term; e.g., cadur 'ball"
___by gesture.

The one significant correlation was between coining a term and vocabulary learning. The frequent coining of terms correlated significantly with the vocabulary learning task ($r=.47$, $p<.05$), suggesting that this strategy makes for good vocabulary learning. There was no relationship between vocabulary learning and describing precisely, using a general term, or using gestures ($r=-.01$, $r=.01$, and $r=.02$, respectively). "Describing lossely" correlated negatively ($r=-.32$) but not significantly with vocabulary learning. The trend of this last correlation, however, might suggest that the strategy of going around the word rather than producing it may not lead to successful vocabulary learning. This possibility needs to be explored. On the other hand, the act of coining a word possibly indicates a creative learning process which does relate to vocabulary acquisition over time.

Discussion

There are a number of issues that this research study raises. One concerns whether the more advanced learner is somehow better able to benefit from associations. Such a conclusion cannot be drawn from this study. Differential ability to make associations by proficiency may be a fruitful avenue for future research. It may also be that the contextualizing of vocabulary makes vocabulary tasks easier for certain types of learners and possibly for whole groups of students who are at a higher level of proficiency in the language. But this also would have to be investigated further.

There is no doubt that the task of asking students to record the

associations that they made actually stimulated students to make associations, where, without such instructions, they may not have. This, then, is a reactive effect of the research. A future study could perhaps teach various ways of making associations explicitly at the outset -- i.e., train students in making associations. Then, also, more could be made of varying the tasks such that the words appear in different inflectional forms and in new contexts. Also, it may be interesting to see whether it is easier to make associations for words in a given form class -- e.g., for nouns as opposed to verbs.[1] More could be done on varying tasks -- e.g., not just reading, but also vocabulary recognition in listening to spoken language, or vocabulary production in speaking as well. Work could be done with free recall to see what students do when recalling a set of words learned the previous day -- e.g., do student recall the words in patterns that reflect organizational learning strategies in the mind?

Also, how important is it that the association be a close one? The Hebrew words or 'light' and ramzor 'street light' are closer in meaning than lifne 'before' and lifamim 'sometimes,' for example. It may be that with each type of association such as those cited above (p. 11), the more successful associations will be the ones in which the forms being associated with one another are closer in sound or meaning. It might also be that the emotional impact of a word affects success at retention though association. For example, perhaps words that the learner perceives as more pleasant will also be more likely to produce successful associations (see Pollio, 1966, re associates for native speakers).

A phenomenon that occurred on occasion was that a word would be glossed wrong in one or more tasks directly following learning, but would then be glossed correctly in later tasks. It is possible that this is

1. Research with native English speakers on word processing in reading has found that nouns are often easier to process than verbs because they are generally more concrete (Marshall, Newcombe, & Holmes, 1975).

the result of recycling of vocabulary -- that students may need repeated exposure to words and occasional review of their meanings to learn them correctly. It may also be that there is a settling process or residual learning whereby students sort out all the various stimuli they are exposed to, and that this takes time.

The research also taught us that the common word list idea and subsequent passage composed from this common list is not necessarily the best way to tap the students' learning skills. Rather, it may pay to have each student design his/her own individualized set of words. The common words tend to include a fair number of words that are not at all difficult for at least some learners. And there is also the possibility of the opposite situation -- i.e., that learners would not necessarily know very common words and would know more difficult ones. This might give the teacher the false impression that the student <u>does</u> know the easier words. The individualized approach is more challenging to the better students, too. More can be done with the concept of word lists as well. Such lists do allow for quick checks on vocabulary but may not be as taxing of global or pragmatic vocabulary skill as contextualized vocabulary tasks.

The individualized approach recognizes that students do not all begin at the same point -- even among beginners, particularly in the case of Hebrew where some learners may have studied Hebrew a little or have been exposed to it through religious activities.

It seems beneficial to bring into discussion the various strategies for writing down vocabulary as it appears in class and then organizing it for easy learning. This topic is discussed in greater detail in the next section of this report.

There is also the whole issue of what it means to learn a particular vocabulary word. Richards (1976), for instance, details the many things that a native of a language knows about a word that he uses. It is an

arduous process at best for a non-native to gain mastery of the word in all those areas. This research project has treated words as having essentially one denotative meaning -- rather than as having multiple meanings, as some of them do. The research has not dealt with most of the categories that Richards lists, such as the connotations of the word, the expected frequency with which it will occur in speech and writing, and the collocations that it will appear in; limits on its function by dialect and register; its syntactic behavior in context; its underlying forms and denotations; the semantic value of the word; and so on. There is the further point that a non-native does not start tabula raza, but rather has his own total network of vocabulary in his native language (Vygotsky, 1962). Thus, when he is exposed to a new vocabulary item in the target language, he is most likely going to translate this item back into his native language system, and so evoking the whole network of emotive meanings, associations, connotations, and multiple meanings that he has developed for this language. Perhaps the relationship between these two networks can be explored more fully with reference to learning of second-language vocabulary through associations.

Finally, it is important to observe vocabulary learning patterns among different types of learners by age, exposure to target language, their degree of motivation to retain the vocabulary, and so forth. The fact that this Brandeis group was able to gloss 75% of the words correctly on the average across tasks is an admirable feat considering that these students were returning to the U.S. within a half year and would thus presumably have less motivation to hold on to these words than might an immigrant.

II. Organizing the Notebook and Studying for a Test: Student Self-Report

After six weeks of study, the students (N=19) were asked to describe how they organized their notebooks. They were asked to write about the ways in which they classified vocabulary (if at all) and how they wrote out grammar rules. They were also asked to describe how they studied for a quiz or test. What emerged from a content analysis of their answers was the following composite description.

Organization of the Notebook

A popular pattern was to enter all material in one notebook in a straight-forward, chronological fashion. However, some students indicated other approaches, such as separate sections for vocabulary and grammar, or one side of the page for vocabulary and the other side for grammar. One or two students noted that they kept separate notebooks for class notes and for homework.

Organization of Vocabulary Entries

Students who had a separate vocabulary section from the outset or who rewrote vocabulary in a separate notebook, varied in their handling of these words. Some listed them by topic group, others alphabetized them, others listed them by form class (e.g., verb, noun, etc.), and some even subclassified words within form class (e.g., verbs by conjugation).

Organization of Grammar

Grammar rules tended to be entered chronologically, sometimes with a box around them to set them off, sometimes rewritten onto a special page. For example, verbs might be displayed by conjugation, in past, present, future, possibly all in the first person singular.

An interesting source of variation concerned the level at which the rule was represented. Some students would just include a sample of language which illustrated the rule, others would have an explanation accompanying this example, and others would have not only the example

and an explanation, but a listing of the exceptions as well.

Study for a Quiz or Test

Most students indicated that as a review, they would go through their class notes and textbook chronologically, focusing on vocabulary and grammar together or separately. Students also reviewed word lists by covering the form in either Hebrew or English and trying to produce the equivalent in the other language.

Students indicated a variety of means for attempting to learn vocabulary through association, by topic group, by the context (in the notebook, textbook, or wherever) that the word appeared in, by the root or base of the word, or by picturing in their minds how the word looked. Several students said that they needed to say the word out loud in order to learn it. One learner even avoided writing down words that he feared he would forget because they seemed obscure at the time that he heard them.

With respect to verb forms, a number of students indicated that they would write out paradigms, in past, present, and future.

Several students would go back to those exercises or portions of exercises that they had trouble with and redo them as preparation for a test. One or two actually made up their own pretend test, took it, and corrected it. Another approach was to have a friend quiz them on the material.

One or two students said that they would rewrite grammatical rules onto a separate page as a means of reviewing for a test. And one student reported a tactic for applying rules about structure to actual structures. He would take sentences from the textbook and do his own sentence-structure analysis.

Discussion

It is clear that no one note-taking or review method is appropriate

for all students, but the foregoing findings do suggest several things. First, students themselves can be an excellent source of information as to study tips -- i.e., how to study more efficiently. Second, students do not differ that much in basic note-taking and review patterns (at least on the basis of self-report). Much of the variance would appear to be a matter of rigor, consistency, and systematicity -- the extent to which a student organizes his/her material.

For example, vocabulary can be classified in a number of imaginative ways beyond simple chronology or even alphabetized listing. For some students, this kind of imaginative listing may facilitate learning. Grammar rules can be rewritten into a special section such that exceptions to the rule appear along side the rule as stated.

It would appear that this line of investigation into study habits for language learning can be a fruitful one. The simple act of making students become more aware of their own methods from the very beginning can help them to adopt strategies that are most productive for them as learners.

It is important to point out that this was an exploratory effort at determining what activities learners engage in regarding the organization of notebooks and studying for tests. Now that types of behavior have been identified, it will be possible to present learners with a more structured form of questionnaire so as to determine whether more successful learners are more prone to exhibit certain behaviors. The data collected in this pilot effort do not show the poorer learners necessarily to be lacking organizational strategies. Quite the contrary, one or two of these students reported some of the most imaginative strategies, such as composing, taking, and then scoring one's own test.

A future questionnaire could check the presence or absence of these study behaviors across all students, and if the behavior exists, the

frequency and consistency with which the students use it. This questionnaire would also ask the learners to explain why they organize their notebooks in this manner -- e.g., because a teacher, a peer, a parent suggested that they do it that way, because they themselves determined this to be an effective way to learn, because this was the easiest way, etc. Another idea would be to collect and analyze the students' notebooks to compare self-report data with their actual performance data.

III. Classroom Observation of Communicative Strategies and Student Verification[1]

This section deals with the insights to be gained from empirical observation of communicative strategies in the classroom when coupled with verification by the students themselves. The study was prompted by the frequently inconclusive results of classroom observation alone (see, for example, Naiman et al., 1975). The researchers attempted to complement observation with intervention, in order to corroborate or refute the intuitive reactions of the researchers. The researchers sat in on a dozen class sessions for a minimum of an hour each time, in an effort to identify informative moments in the learning process -- i.e., moments in which the students made a particularly revealing type of error, achieved striking success, or paused in confusion; as well as moments when the student-teacher interaction led to student confusion possibly resulting in erroneous utterances.

Whereas our original intention was to let areas of conspicuous success provide opportunities for investigating communicative strategies, it turned out to be easier to identify and investigate areas of difficulty because the errors that arose called attention to the problems. We were not, in fact, struck by exceptional success. It may have been that such areas of success were not that common or at least not conspicuous. In

1. We would like to thank Joan Rubin for her helpful comments on this mini-study.

fact, not that many occasions arose in which communicative errors seemed to merit immediate feedback from the student as to what strategy s/he was using. Part of the problem is that students do not do very much talking in these kinds of classes, and when they do talk, it is often orchestrated by the teacher.

It became apparent that it was best to get student feedback as soon after the event as possible. Several times the class session was actually interrupted in order to ask the learner what s/he was thinking when s/he said something. These interventions were usually informative, but did usually distract the teacher. In one case, such intervention led the teacher on a rather lengthy digression. The more effective approach was to talk to individual students or to groups during a break or at the end of the class session. The approach of asking students to retrospect on what they said, even only a day later, was found to be only about 50% effective.

It should also be pointed out that teachers resented having their students observed altogether. Even though we told the teachers that we did not come to evaluate them, they were uncomfortable. Also, the very fact that there was someone in the classroom may have changed the nature of student participation somewhat. However, some reactive effects of classroom observation are unavoidable.

The data to be presented below have been organized in the following way. First, each instance of student communication reported on contains in it some deviant form or forms. In all cases, the student's explanation for how s/he arrived at that form was not the explanation that the researchers would necessarily have predicted. Each student mentioned in the discussion is also identified as studying at the beginner (B), intermediate (I), or advanced (A) level, and as being a good (g), fair (f), or poor (p)

performer generally (on the basis of class grades, success at learning vocabulary words, and so forth). Thus, it is possible to evaluate student strategies in terms of class level and the student's individual proficiency.

The instances of communication are also labeled according to the type of communicative strategy most likely reflected in the given case, and these strategies are, in turn, grouped as to being "good," "bad," or "neutral." These ratings are only suggestive, and not definitive since, for one thing, a strategy that is good for one student may be bad for another. Also, the ratings are more intuitive than empirical, in that that are based largely on the researchers' preconceptions about successful second-language strategies. It must also be remembered that in all cases both good and bad strategies led to deviant forms. In other words, the strategy can be a good one leading nonetheless to a deviant form. But then again, the process of language learning is one of continual experimentation and, hence, characterized by the committing of errors on the way to mastery.

Good Communicative Strategies

1. Creating a verb form through association

The following is an example of a strategy that could only be revealed through questioning. In a dialog with a fellow student, a student (B/f) asked where she would have to get off the bus, as follows: eyfo ani yariya? 'where I (no such form)?' The correct form instead of yariya is ered 'I will get off.' The students had been exposed to the future but had not achieved productive control over this tense at the point of observation. The student explained that she lived on a street called yordey hasira and knew that the first word of the street name was also derived from the verb laredet 'to get off, go down.' The prefix of her verb form would

suggest that she was constructing a present tense form in place of yoredet. From her explanation, it would seem that the first part of her form is taken from the street name. It may also be that she is using the third person future prefix y, as in yored 'he will get off.'

In any event, the learner is using association to a street name to help in communication, and this, in itself, is a plus (see the first section, on vocabulary learning through association). The creative process revealed here is much like that of coining a new word, which was shown to correlate positively with vocabulary learning over time (reported on in section #1).

2. Generating rules

Generating rules for how the language works is a fundamental process in language learning, and hence is rated as a good strategy. A host of error analysis studies have demonstrated how the appearnce of errors in learners' speech may be an excellent indication of the stage of rule development in the learners' interlanguage. For example, one student generated a passive verb form by combining the passive form for the first conjugation, nixtav 'it is written,' with the past participle, katuv 'written,' producing *nixtuv. The student (I/p) said that she thought nixtuv was the passive structure. This type of error reflects an active process of rule construction. Another example of rule formation was the following: *kol dvarim 'all the things,' with omission of the definite article, ha -- kol hadvarim. The student (I/f) explained that she was making an analogy to kol yom 'every day,' an expression not containing the definite article.

It should be noted by way of qualification that generating rules is a good strategy among flexible learners, who will be willing to discard an incorrect rule and introduce another more correct one.

Bad Communicative Strategies

1. Not attending to the question in its entirety

The teacher asked a student (I/p) when Shmuel Hanagid lived, and the student said when he died (met 'he died' instead of xay 'he lived'). The student reported that he did not pay attention to the whole question. It should be pointed out that this student did not like the teacher, and so was generally uncooperative. (When a new teacher was introduced after three months, his performance improved somewhat.) It is also possible, of course, that the student did not yet have an effective general strategy for looking for the topic in a question.

2. Field dependence: Distraction from material in the immediate context

After the teacher had explained the difference between ašir 'rich' and ani 'poor' and after a particularly studious pupil (b/g) had asked for a clarification as to which word meant what, this same student seemed to have confused the two. The teacher asked:

eze iš yeš lo harbe kesef? 'Which man has a lot of money?'

The student answered, ani 'a poor man.' In questioning the student as to the source of confusion, she explained that once she heard lo, she assumed this to be the homonymous negative particle lo and interpreted the question in the negative, i.e., "Which man doesn't have a lot of money?"[1]

Although the negative form would actually have to be eyn rather than lo, the important point is that the learner heard what she thought was a marker of negation. This is an example of what we are referring to as "field dependence" -- i.e., distraction caused by a word at the local level, in the immediate context. What is not clear is whether this is a fixed cognitive style, or whether it is possible to train a learner to be less field dependent -- i.e., to be more cognizant of the larger context so as not to be misled by local distractors. If it is possible to shift the

1. Hebrew is rich in homonyms, which creates a problem for the learner. For example, there are three special words that sound the same in current Hebrew: kara 'it happened,' 'he tore,' and 'he read.'

learner from one style to another, then we would refer to field dependence as a "bad" strategy, with field independence being the "good" strategy.

3. Grouping words in the target language by sound alone.

A student (I/f) said hirgia baarets 'he calmed down (someone) in Israel' instead of higia baarets 'he arrived in Israel.' She said that at some time in the past she had, with the help of a dictionary, grouped together four verbs that were similar in sound: lehargia 'to calm down,' lehagia 'to arrive,' lehargil 'to accustom,' and lehargiš 'to feel.' She then learned them as a group and at the moment when retrieval was necessary, she selected an inappropriate member of this group. This is, in fact, probably a bad strategy — i.e., grouping by similarity in sound without some further means of differentiating among the words.

4. Focusing only on the word level

There were several cases of learner attention in reading focused only on individual words, without paying attention to the context. For example, one student (B/p) asked several times what maspik 'enough' meant. It seemed like an easy enough word. The student explained, however, that she confused it with mastik 'chewing gum.' It is interesting here that context did not help to disambiguate the word for her, but rather simply added to her confusion. The student was thus operating at too local a level — not looking for collocations, for phrasing.

What makes the above strategy "bad" is that context is essential in the accurate comprehension and production of lexical items, even for natives. Of course, the vocabulary learning study, reported on above, suggested that perhaps beginning learners sometimes find context to be more of a hindrance than a help, until they gain greater mastery of the basics.

5. Lack of structural analysis of a word

This is more accurately the absence of a good strategy, namely, word analysis. A student (b/g) asked the meaning of a word written on the board, xug 'department,' after the word had been defined and used extensively in the lesson. He explained that in the discussion, the word had only been used in its plural form, xugim, and so he did not recognize the word in the singular. This was a good student who did not have problems with singular/plural relationships in general. The "bad" strategy is to let words go by in listening without noting important structural features, such as number in the case of xug-xugim.

Neutral Communicative Strategies

We identified at least four strategies that may not be inherently good or bad, but can be either: guessing, transfer from the native language, the use of unanalyzed material, and the preplanning of a phrase or utterance.

1. Creating forms through guessing

Rubin (1975) would suggest that the learner who is willing to guess -- i.e., the learner who is comfortable in the face of uncertainty -- may be the better learner. But of course, guessing is more likely to be a "good" strategy if the learner is an accurate guesser, i.e., efficient at gathering and storing information and at using clues. It may be that guessing ceases to be a good strategy once the learner reaches a certain stage, for example.

One pupil (I/f) noted that she did not have her verbs sorted out according to conjugation and that she just guessed from time to time -- not on the basis of any particular analogy or association. Two examples of guessing were the forms *lezakor, seemingly a third conjugation verb, instead of lizkor 'to remember,' a first conjugation verb; and *bišal instead of bišel 'he cooked.' The researcher might, of course, question the learner's interpretation that she is not making any generalizations.

Regarding the second example, it could be argued that the a of bišal is by analogy to the vowel in first and second person singular and in first person plural respectively: bišalti, bišalta (masc.), bišalt (fem.), and bišalnu. Yet different students can arrive at the same deviant form in different ways. And it is reasonable to assume that guessing is one way.

2. Transfer from the native language

Research on language transfer has indicated how transfer can be quite helpful in that there are always similarities across languages, which the learner can draw on to lessen the learning burden (see Selinker, 1969). On the other hand, transfer can also produce deviant forms, as when the two languages are different with respect to the given structure. The following is an example of transfer which in this case produced interference (hence, negative transfer) -- but interference which was not obvious to the observer and was revealed only through student introspection. The case in point was a student's (B/g) use of the past tense in Hebrew in giving directions to someone as to how to get to a place:

*axaray raitá kfar raxel... 'after you've seen the town of Rachel...'

Aside for the three local errors -- in the use of the masculine raita 'you saw' instead of the feminine rait 'you saw,' the accent on the last syllable instead of on the second (raíta), and the absence of še 'that' before the verb (axaray še...), there is the further point that in Hebrew the present perfect tense (expressed by the same form as the simple past) is not used to indicate future perfect (i.e., "you will have seen") as in English. In Hebrew, the simple future inflected for second person feminine, tir'i, is called for. The investigator realized that interference was the problem only at the moment that the student gave an English equivalent of what she had

wanted to say.

3. The use of unanalyzed material

The use of unanalyzed material (i.e., certain ritualistic social routines, such as greetings, invitations, apologies, and so forth, as well as other units learned as a whole) has been shown to be an effective means of engaging in communication during the initial stages of second-language learning (see Fillmore, 1976). The following is an example of the use of unanalyzed material, in this case producing an error. A student had found in the dictionary the form naasa 'he became' for use in a class talk. (That dictionary presents verbs in the third person singular form.) The teacher wrote this form on the board. Another student (I/g) was asked to discuss what the first student had said, and she said:

harbe xošvim šeyisrael tsarix *naasa yoter gadol 'Many think that Israel has to become bigger.'

She took the verb form in the inflected form naasa, and used it in the infinitive slot, leheasot 'to become.' The student explained that she simply took the word as it appeared on the board and that the teacher's explanation was too quick for her. The confusion may also have been because the teacher did not give a full gloss -- i.e., 'he became,' 'to become,' etc. The teacher explained, after class, that she had purposely given little attention to the form because it was too tough for students at that level. This example illustrates how a student may use a form exactly as it appears in class, without analyzing it to determine the appropriate inflection of the form in the given context. It also illustrates how students, particularly the better ones, pay attention to a number of things, even what teachers may wish to pass over lightly or avoid discussing.

Actually, the use of unanalyzed material seems to be most effective (i.e., non-error-producing) in the generation of pat phrases, such as

ma ixpat lexa? 'what difference does it make to you?' and the like. Probably because they appear as one unit, rather than within context (as with naasa), there is more likelihood that they will come out sounding correct. Fillmore (1976) points out that little by little the learner begins analyzing these phrases and using elements of them productively.

4. Preplanning of a phrase or utterance

We found at least two types of preplanning errors -- one in the incomplete production of a construct form and one in the lack of elision in an entire preplanned sentence. This area of preplanning may be a good example of where a communicative strategy is good for some learners and not for others. Of course, under the pressure of a communicative situation, preplanning may slow a learner down and possibly interrupt the flow of conversation.

The following are the two examples found in this study. One student (I/g) used a noun in the construct form without its accompaniment:

ze al *hamilxemet neged haaravim 'It's on the war against the Arabs.'

In construct form, milxama 'war' becomes milxemet and the definite article ha is dropped. The student explained that she was going to use a construct form, milxemet šešet hayamim 'the Six Day War,' but decided against it at the last minute.

Another student (I/p) produced a sentence in which he neglected to use the obligatory elision between the preposition le 'to' and the definite article ha 'the,' i.e., la. He said:

latet adama *lehaaravim 'to give land to the Arabs'

He explained that he had not received formal instruction concerning elision but was aware of it from his study of French. He gave as the explanation for this error that he plans out each sentence in its entirety before he speaks and then gives the whole sentence, whereas someone else may utter sections of the sentence as s/he is producing it, pausing between

sections. The implication is that someone who generates the sentences in sections with a pause between each one would pay more attention to a matter such as elision. It appeared that this learner was more caught up in the process of choosing vocabulary and syntactic patterns, than in that of considering phonological (actually, morphophonemic) adjustments according to the context.

Discussion

We note that both good and bad communicative strategies appeared across class levels, and were used both by better and poorer students. We also note that the communicative strategies identified are just those that emerged from an introspective investigation of reasons for learners' errors. But instead of providing an exhaustive list of communicative strategies, this section has attempted rather to demonstrate how difficult it is for an outside observer to establish the actual source of the error and to identify the learner strategy being employed without consulting the learners themselves.

It is, of course, true that learners may not know why they produced certain forms, or may be inaccurate in their explanations. The important point is that if the purpose of observation is to find out what the learners are doing (thinking, processing, etc.), then classroom observation needs to be coupled with more interventionist tactics such as getting students to introspect (or retrospect at short range).

This phase of the research raised some real questions as to what "good" strategies consist of. For example, is the use of broad association (as in ani yariya -- association to a street name) actually a good strategy? In the section on vocabulary learning (above), we also raise the issue of "closeness of association." Also, in what instances

and with what learners might preplanning of utterances be a "good" strategy? Perhaps too much preplanning is detrimental, particularly for certain types of learners. These questions warrant further investigation.

IV. Test-Taking Strategies

One of the more promising sources of insights into testing at present has come from the field of ethnomethodology. Ethnomethodologists ask what processes students actually go through when they take tests (see Cicourel et al., 1974). There is a growing interest in the thinking processes that brought the learner to a correct or an incorrect answer. In this line of investigation, we look carefully at what is being asked and at the expected vs. the actual response procedure (using the test taker as informant). We attempt to locate the source of difficulty in the test item or procedure (Cohen, forthcoming).

In the spirit of this process-oriented approach to testing, we conducted an investigation concerning the strategies that the students used in taking exams. After the students had taken their end-of-summer exam marking the completion of two months of intensive Hebrew training, we went through each exam thoroughly and identified points for discussion with the students themselves. These points primarily reflected types of errors that might provide insights into the strategies used in test taking. Students met individually with an investigator approximately a week after they had taken the exam, and were asked to comment about some ten-to-twenty points in their exam. (Frequently, student explanations for their performance were different from prior explanations that the researchers and intuited.) Responses to these queries were content analyzed, and the following reflects a brief discussion of some of the strategies that emerged -- i.e., strategies that students themselves reported using. Hence, the following discussion is not exhaustive

of test-taking strategies, but rather suggestive of a few such strategies. There is some overlap across categories, as well.

1. Incomplete Analysis or Lack of Attention

As a receptive strategy, students would not necessarily process the entire item stimulus, but only part of it, and answer that part. Our probe made it clear that students who do this are not necessarily being careless -- i.e., answering too quickly or haphazardly. They may, instead, simply not understand a word or phrase in the item stimulus. The strategy, then, is to forge ahead and answer what they can on the basis of what they know. This approach is slightly different from that reported in Rosenfeld (1976), whereby students read little or none of the instructions before doing homework excercises. In that case, the students felt that they knew what to do and did not need to dwell on the question. In the current research, students would only incompletely comprehend the question.

As a productive strategy (i.e., a strategy for writing in the target language), students would lift material intact from an item stimulus or from, say, a passage for use in an answer. The result would be verb forms incorrectly inflected for person, number, gender, or tense; verbs reflecting the correct root but an incorrect conjugation, etc.

We observed a variety of strategies for producing, say, a verb form when the rules for production had not been learned (presystematic stage) or were learned with systematic deviancies (Corder, 1974). If students did not know the correct verb form, they would use the infinitive, take a form from a tense that they knew, take one inflectional ending and generalize it across person and gender, take an inappropriate tense from the stimulus and simply add the prefix for person, and so on.

Another strategy for production was simply to use prepackaged,

unanalyzed material (as described in the above section on communicative strategies) and combine it with analyzed forms. For example, given that Hebrew prepositions like mi 'from' can be prefixed to the object of the preposition through elision (mi + tsad 'side' = mitsad), a student learns this form as one word and then affixes another preposition to it on an exam, e.g., *bemitsad 'in from a side,' intending "on a side."

2. Local Processing/Field Dependence

A category related to incomplete analysis is that of local processing with distraction from the field -- hence, field dependence (as discussed in the section on communicative strategies, above). Field dependence implied distraction from elements that are in the immediate environment but irrelevant to the language processing being called for (Cohen, 1977). For example, if the learner uses a plural verb with a singular subject because the intervening indirect object is plural, this would be termed field dependence. Specifically, in *hayu lanu memšala xadaša *'there were to us a new government' (lit.), the learner produces hayu 'there were' instead of hayta 'there was' (fem.) out of distraction from lanu 'to us.'

3. Test-Induced Errors

At first glance, it would appear that this category of test-induced errors does not fit under student strategies, but the type of test will very often influence the type of strategies that the students will use. We encountered a certain number of instances where students were called upon to use their own best powers of discernment, discrimination, and analogy, in answering test items. They had to use their "own best powers" because they were in a situation where they could not ask for help. The instances under discussion were prompted by the teacher's introduction of new forms or forms that the students had had only infrequent exposure to. In such cases, students would not discern that there was a difference

between, say, a given verb form and forms in a conjugation that the students erroneously identified it with. For example, when given the form metapsim 'they climb' and asked to give the third-person plural past tense (tipsu), a fair number of students wrote *metapsu. The students were probably making erroneous visual and auditory analogy to another conjugation, since the present-tense form (metapsim) is close to the hitpael conjugation in form.

In another case, the item stimulus had a verb in inflected form and the students were to use the verb in the infinitive in the response. Neither word was that familiar to the students, and they tended to use the stimulus form incorrectly in their response, primarily as a means of simplifying the task.

4. Use of Frequently Heard, Popular Forms

Several students reported that they would sometimes select forms simply because these were the forms that were popular; forms that they heard most often -- e.g., diber 'he spoke' when they should have used amar 'he said'; anašim *yisraelit 'Israeli people' (adj. in fem. sing.) instead of anašim yisraeliim (adj. correctly inflected for plural). The interviews with the students brought out the point that such errors as these might well not occur in natural communicative situations. However, when under the pressure of a testing situation, students may choose the initial form that comes into their heads, e.g., diber instead of amar.

5. Looking for a Trick

Students reported looking for the trick in a given item and trying to avoid committing the error or errors that this item was testing for. For example, when given a sentence in English to translate into Hebrew (e.g., "I want you to write a letter."), the student said that she knew there was a trick but could not remember what it was exactly. She knew that she could not use the infinitive like in English. Therefore, she

used a present tense form of the verb in the required relative clause in Hebrew. However, the tense of the verb in Hebrew must be future (ani rotse shata tixtov mixtav, literally 'I want that you will write a letter'). She wrote kotev instead of tixtov (present tense instead of future).

6. Purposive Omission

There was mention above of incomplete analysis as a receptive strategy, i.e., dealing only with those parts of an item stimulus that the student understands. On the productive side, there is likewise the purposive omission of material. For example, in one case students were asked to translate from English to Hebrew. A student reported leaving out an indirect pronoun because he was not sure how to say it and did not feel that it was important.

7. Translation

Several students reported the use of translation as a test-taking strategy. One or two would write out a complete native-language version of a given text before answering questions about it. They said that this made them feel more secure. Others would at least translate questions in their entirety into the native language before attempting to answer them.

8. Transfer from the Native Language

Not so surprisingly, students would often produce forms that were the direct translation equivalent of forms in the native language (e.g., *behamaslul 'in a the track,' instead of bamaslul 'in the track'). In some cases, the tendency was reportedly so strong that students would consciously indulge in interference avoiding -- namely, trying not to choose forms that were like those in the native language (even where such parallels actually were correct).

9. Over-Correction

In some instances, students read over their tests and made changes

such that the new answer was wrong, whereas the original answer was correct. Hence, the students' first instincts were accurate. Possibly the students over-corrected because the teacher requested that they check over their work carefully. Also, students may have been too quick to assume that they probably answered incorrectly the first time. This is an issue of confidence as a learner in the face of inevitable imperfection while learning.

The results of this study suggest guidelines for ways to improve test taking. Students could be forewarned, for example, through a set of suggestions about how to take tests. Such tips could include the following:

(1) Read the directions carefully and pay attention to the entire item stimulus. Be aware that clues to the form that the answer is to take (e.g., the tense to use, word order, etc.) are often found in the question itself.

(2) Pay attention to the relationship of elements to one another, and try to avoid being distracted by elements that are irrelevant to the task at hand (e.g., elements that suggest a different inflection from the one called for).

(3) When having to deal with new elements in a test, scrutinize these carefully within the entire context and avoid being misled by features which are conspicuous but which lead to the wrong analogy.

(4) Avoid the temptation to choose a form simply because it appears or is popular.

(5) Do not assume that there is always a trick to answering an item, but if the item <u>is</u> tricky, try to identify all the necessary operations.

(6) Go along with instinct. Do not be too quick to correct items which may be correct to begin with.

Conclusion

Clearly this is only a start. The findings from these four mini-studies still do not provide very many definitive guidelines for the language learner in easifying the learning process. Yet we feel that some of the basics are here. It appears that word associations can help reduce the learning burden, and we have found that making associations does not necessarily come automatically. Instead, possible associations should probably be laid out to the students more explicitly.

Second, students could benefit from tips concerning the organization of notebooks and ways to study for tests. The feeling we got was that there was too little organization other than straight chronological recording and reviewing for tests. However, the particular alternative approaches to recommend (e.g., vocabulary on one side, grammar on the other; a separate section for vocabulary, organized in a series of ways; special handling of grammatical rules, etc.) are still to be determined. This study proved purely descriptive of ways in which students do such things. Hopefully, future research will yield a set of guidelines that students could select from according to their own learning needs.

With regard to the classroom observation study, we think that we validated our methodological point -- i.e., that in order for the observer to identify the communicative strategy that the learner is using, s/he may well have to ask the learner himself/herself to introspect. With respect to which communicative strategies are good and which are bad, there appears to be much work still to do. Our categorizing here has ben more theoretically- and intuitively-based than empirical.

The area of test-taking strategies is, indeed, a fascinating one. As said above, researchers are just beginning to apply the ethnomethodologist's

tools to the analysis of how a student takes a test. Clearly there is much to be gained from checking up on student strategies in this area, and we see that even from this modest effort, an initial list of at least six tips for students has been generated.

Although certain generalizations in this study, particularly regarding word association, are based on a small population (19 students) and so may be questioned on these grounds alone, it is our contention that it is important to start out small so as to establish areas worthy of further larger-scale investigation. Vocabulary learning through word association is one such area. Hopefully, after more extensive research has been conducted, it will be possible to draw up a manual for the second language learner on how he can easify the learning process.

The particular direction that future research will take is still in the planning stages. But there clearly needs to be more empirical-level work with vocabulary learning -- i.e., an experiment wherein the relationship between certain sets of associational strategies and retention is charted over time. Variables such as the type of association, the class level, student proficiency level, student contact with the words out of class, and so forth, would all be taken into account.

It also appears useful to develop a more sophisticated screening device for checking students' cognitive style and personality factors. There seems to be a need to develop measures of cognitive flexibility and extraversion, for example, that are more compatible with second-language learning phenomena than are currently-available psychologically-based measures.

APPENDIX

Language Background Questionnaire

1. Please indicate the languages that you have been exposed to in the order of exposure, starting with the native language.

	Type of Exposure			Understand	Engage in	Read	Write
language	At Home	At School	Other	Conversation	Convers.	Mag.	Comp.
(1)							
(2)							
(3)							
(4)							
(5)							

Ability: E=excellent, G= good, F=fair, P=poor, N=none.

2. Please indicate your overall exposure to Hebrew.

Formal Study
No. of years ___
No. of months ___
Ave. hours per day ___

Informal Exposure/Study (Approx. Time)
at home _____
with friends _____
at camp _____
other (explain) _____

Rate yourself in Hebrew.
What were your overall grades (if given) _____
General mastery of grammar: very good ___ good ___ fair ___ poor ___.
Extent of vocabulary: very great ___ good ___ fair ___ limited ___.

3. How would you rate yourself in English (or mother tongue/dominant language, if other) in vocabulary and grammar?

	In English	All Other Languages Combined
Learning vocabulary		
Learning grammar rules		

(Write in very good, good, fair, poor)

4. How do you classify what you learn in a new language? Below are some behaviors. Indicate which you do to what extent by means of the following frequency scale: 1=I do this all the time, 2=I do this sometimes, 3=I do this rarely, 4=I never do this.

Learn vocabulary:
___in topic groups (e.g., words for clothing)
___by parts of speech (nouns, pronouns, adjectives, verbs, etc.)
___cognates (same root, base) within the same language
___groups of synonyms

Learn grammar:
___by textbook rules
___by checking and rechecking resource grammar books
___by making up own rules to fit data
___by making lists of errors and reviewing them

5. What do you do when you're not sure of a word? Let's say that you don't know the word for "balloon" in Hebrew. How might you get the concept across? (1=do all the time, 2=do sometimes, 3=do rarely, 4=never do)
___coin own word; e.g., cadur-avir 'air-ball'
___describe concept as precisely as possible; e.g., cadur migumi dak, male avir 'a thin rubber ball, filled with air'
___describe concept loosely; e.g., ze agol veze nafuax veze af. 'It's round and it's blown up and it floats.'
___use a more general term; e.g., cadur 'ball'
___by gesture.

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